



1600

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/677,653A

DATE: 01/28/2003  
 TIME: 17:02:22

Input Set : A:\A-58631-4.txt  
 Output Set: N:\CRF4\01282003\I677653A.raw

**SEQUENCE LISTING**

3 (1) GENERAL INFORMATION:  
 4 (i) APPLICANT: P. D. CHRISTIAN, K. H. J. GORDON and  
 5 T. N. HANZLIK  
 7 (ii) TITLE OF INVENTION: INSECT VIRUSES AND THEIR USES IN  
 8 PROTECTING PLANTS  
 10 (iii) NUMBER OF SEQUENCES: 53  
 12 (iv) CORRESPONDENCE ADDRESS:  
 13 (A) ADDRESSEE: DORSEY & WHITNEY LLP  
 14 (B) STREET: FOUR EMBARCADERO CENTER, SUITE 3400  
 15 (C) CITY: SAN FRANCISCO  
 16 (D) STATE: CALIFORNIA  
 17 (E) COUNTRY: UNITED STATES OF AMERICA  
 18 (F) ZIP: 94111  
 20 (v) COMPUTER READABLE FORM:  
 21 (A) MEDIUM TYPE: Floppy disk  
 22 (B) COMPUTER: IBM PC compatible  
 23 (C) OPERATING SYSTEM: PC-DOS/MS-DOS  
 24 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25  
 26 (vi) CURRENT APPLICATION DATA:  
 27 (A) APPLICATION NUMBER: US/09/677,653A  
 28 (B) FILING DATE: 03-Oct-2000  
 29 (C) CLASSIFICATION:  
 31 (viii) ATTORNEY/AGENT INFORMATION:  
 32 (A) NAME: RICHARD F. TRECARTIN  
 33 (B) REGISTRATION NUMBER: 31,801  
 34 (C) REFERENCE/DOCKET NUMBER: A-58631-4/RFT/NBC  
 36 (ix) TELECOMMUNICATION INFORMATION:  
 37 (A) TELEPHONE: (415) 781-1989  
 40 (2) INFORMATION FOR SEQ ID NO: 1:  
 41 (i) SEQUENCE CHARACTERISTICS:  
 42 (A) LENGTH: 13 base pairs  
 43 (B) TYPE: nucleic acid  
 44 (C) STRANDEDNESS: single  
 45 (D) TOPOLOGY: linear  
 47 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
 49 GGATCCACAG NNN  
 51 (2) INFORMATION FOR SEQ ID NO: 2:  
 52 (i) SEQUENCE CHARACTERISTICS:  
 53 (A) LENGTH: 28 base pairs  
 54 (B) TYPE: nucleic acid  
 55 (C) STRANDEDNESS: single  
 56 (D) TOPOLOGY: linear

**ENTERED**

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58	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:	
60	ATGGGCGATG CCGGCGTCGC GTTCACAG	28
62	(2) INFORMATION FOR SEQ ID NO: 3:	
63	(i) SEQUENCE CHARACTERISTICS:	
64	(A) LENGTH: 27 base pairs	
65	(B) TYPE: nucleic acid	
66	(C) STRANDEDNESS: single	
67	(D) TOPOLOGY: linear	
69	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:	
71	ATGGAGGATG CTGGAGTGGC GTCACAG	27
73	(2) INFORMATION FOR SEQ ID NO: 4:	
74	(i) SEQUENCE CHARACTERISTICS:	
75	(A) LENGTH: 27 base pairs	
76	(B) TYPE: nucleic acid	
77	(C) STRANDEDNESS: single	
78	(D) TOPOLOGY: linear	
80	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:	
82	ATGAGCGAGG CCGGCGTCGC GTCACAG	27
84	(2) INFORMATION FOR SEQ ID NO: 5:	
85	(i) SEQUENCE CHARACTERISTICS:	
86	(A) LENGTH: 30 base pairs	
87	(B) TYPE: nucleic acid	
88	(C) STRANDEDNESS: single	
89	(D) TOPOLOGY: linear	
91	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:	
93	CCATCGATGC CGGACTGGTA TCCCAGGGGG	30
96	(2) INFORMATION FOR SEQ ID NO: 6:	
97	(i) SEQUENCE CHARACTERISTICS:	
98	(A) LENGTH: 31 base pairs	
99	(B) TYPE: nucleic acid	
100	(C) STRANDEDNESS: single	
101	(D) TOPOLOGY: linear	
103	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:	
105	CCATCGATGC CGGACTGGTA TCCCAGGGGA C	31
107	(2) INFORMATION FOR SEQ ID NO: 7:	
108	(i) SEQUENCE CHARACTERISTICS:	
109	(A) LENGTH: 39 base pairs	
110	(B) TYPE: nucleic acid	
111	(C) STRANDEDNESS: single	
112	(D) TOPOLOGY: linear	
114	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:	
116	CCATCGATGA TCCAGCCTCC TCGCGGGGCC GGATGGGCA	39
118	(2) INFORMATION FOR SEQ ID NO: 8:	
119	(i) SEQUENCE CHARACTERISTICS:	
120	(A) LENGTH: 39 base pairs	
121	(B) TYPE: nucleic acid	
122	(C) STRANDEDNESS: single	
123	(D) TOPOLOGY: linear	
125	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:	

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127 GCTCTAGATC CATTGCCAT CCGAAGATGC CCATCCGGC	39
129 (2) INFORMATION FOR SEQ ID NO: 9:	
130 (i) SEQUENCE CHARACTERISTICS:	
131 (A) LENGTH: 39 base pairs	
132 (B) TYPE: nucleic acid	
133 (C) STRANDEDNESS: single	
134 (D) TOPOLOGY: linear	
136 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:	
138 CCATCGATT ATGCCGAGAA GGTAAACAGA GAAACACAC	39
140 (2) INFORMATION FOR SEQ ID NO: 10:	
141 (i) SEQUENCE CHARACTERISTICS:	
142 (A) LENGTH: 39 base pairs	
143 (B) TYPE: nucleic acid	
144 (C) STRANDEDNESS: single	
145 (D) TOPOLOGY: linear	
147 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:	
149 GCTCTAGACC AGGTAATATA CCACAAACGTG TGTTTCTCT	39
152 (2) INFORMATION FOR SEQ ID NO: 11:	
153 (i) SEQUENCE CHARACTERISTICS:	
154 (A) LENGTH: 45 base pairs	
155 (B) TYPE: nucleic acid	
156 (C) STRANDEDNESS: single	
157 (D) TOPOLOGY: linear	
159 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:	
161 GGGGGGAATT CATTAGGTG ACACTATAGT TCTGCCTCCC CGGAC	45
163 (2) INFORMATION FOR SEQ ID NO: 12:	
164 (i) SEQUENCE CHARACTERISTICS:	
165 (A) LENGTH: 27 base pairs	
166 (B) TYPE: nucleic acid	
167 (C) STRANDEDNESS: single	
168 (D) TOPOLOGY: linear	
170 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:	
172 GGGGGGATCC TGGTATCCC GGGGGGC	27
174 (2) INFORMATION FOR SEQ ID NO: 13:	
175 (i) SEQUENCE CHARACTERISTICS:	
176 (A) LENGTH: 28 base pairs	
177 (B) TYPE: nucleic acid	
178 (C) STRANDEDNESS: single	
179 (D) TOPOLOGY: linear	
181 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:	
183 CCGGAAGCTT GTTTTCTTT CTTTACCA	28
185 (2) INFORMATION FOR SEQ ID NO: 14:	
186 (i) SEQUENCE CHARACTERISTICS:	
187 (A) LENGTH: 46 base pairs	
188 (B) TYPE: nucleic acid	
189 (C) STRANDEDNESS: single	
190 (D) TOPOLOGY: linear	
192 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:	
194 GGGGGATCCG ATGGTATCCC GAGGGACGCT CAGCAGGTGG CATAGG	46

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196 (2) INFORMATION FOR SEQ ID NO: 15:  
197 (i) SEQUENCE CHARACTERISTICS:  
198 (A) LENGTH: 52 base pairs  
199 (B) TYPE: nucleic acid  
200 (C) STRANDEDNESS: single  
201 (D) TOPOLOGY: linear  
203 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
205 AAATAATTTT GTTACTTTAG AAGGAGATAT ACATATGAGC GAGCGAGCAC AC 52  
207 (2) INFORMATION FOR SEQ ID NO: 16:  
208 (i) SEQUENCE CHARACTERISTICS:  
209 (A) LENGTH: 55 base pairs  
210 (B) TYPE: nucleic acid  
211 (C) STRANDEDNESS: single  
212 (D) TOPOLOGY: linear  
214 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:  
216 AAATAATTTT GTTTAACCTT AAGAAGGAGA TCTACATATG CTGGAGTGGC GTCAC 55  
218 (2) INFORMATION FOR SEQ ID NO: 17:  
219 (i) SEQUENCE CHARACTERISTICS:  
220 (A) LENGTH: 30 base pairs  
221 (B) TYPE: nucleic acid  
222 (C) STRANDEDNESS: single  
223 (D) TOPOLOGY: linear  
225 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:  
227 GGAGATCTAC ATATGGGAGA TGCTGGAGTG 30  
229 (2) INFORMATION FOR SEQ ID NO: 18:  
230 (i) SEQUENCE CHARACTERISTICS:  
231 (A) LENGTH: 17 base pairs  
232 (B) TYPE: nucleic acid  
233 (C) STRANDEDNESS: single  
234 (D) TOPOLOGY: linear  
236 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:  
238 GTAGCGAACG TCGAGAA 17  
240 (2) INFORMATION FOR SEQ ID NO: 19:  
241 (i) SEQUENCE CHARACTERISTICS:  
242 (A) LENGTH: 31 base pairs  
243 (B) TYPE: nucleic acid  
244 (C) STRANDEDNESS: single  
245 (D) TOPOLOGY: linear  
247 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:  
249 GGGGGATCCT CAGTTGTCAG TGGCGGGGTA G 31  
251 (2) INFORMATION FOR SEQ ID NO: 20:  
252 (i) SEQUENCE CHARACTERISTICS:  
253 (A) LENGTH: 28 base pairs  
254 (B) TYPE: nucleic acid  
255 (C) STRANDEDNESS: single  
256 (D) TOPOLOGY: linear  
258 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:  
260 GGGGATCCCT AATTGGCACG AGCGGGCGC 28  
263 (2) INFORMATION FOR SEQ ID NO: 21:

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264 (i) SEQUENCE CHARACTERISTICS:  
265 (A) LENGTH: 29 base pairs  
266 (B) TYPE: nucleic acid  
267 (C) STRANDEDNESS: single  
268 (D) TOPOLOGY: linear  
270 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:  
272 AATTACATAT GGCGGCCGCC GTTTCTGCC 29  
274 (2) INFORMATION FOR SEQ ID NO: 22:  
275 (i) SEQUENCE CHARACTERISTICS:  
276 (A) LENGTH: 29 base pairs  
277 (B) TYPE: nucleic acid  
278 (C) STRANDEDNESS: single  
279 (D) TOPOLOGY: linear  
281 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:  
283 AATTACATAT GTTCGCGGCC GCCGTTTCT 29  
285 (2) INFORMATION FOR SEQ ID NO: 23:  
286 (i) SEQUENCE CHARACTERISTICS:  
287 (A) LENGTH: 19 amino acids  
288 (B) TYPE: amino acid  
289 (C) STRANDEDNESS: single  
290 (D) TOPOLOGY: linear  
292 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:  
294 Phe Ala Ala Ala Val Ser Ala Phe Ala Ala Asn Met Leu Ser Ser Val  
295 1 5 10 15  
296 Leu Lys Ser  
299 (2) INFORMATION FOR SEQ ID NO: 24:  
300 (i) SEQUENCE CHARACTERISTICS:  
301 (A) LENGTH: 20 amino acids  
302 (B) TYPE: amino acid  
303 (C) STRANDEDNESS: single  
304 (D) TOPOLOGY: linear  
306 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:  
308 Pro Thr Leu Val Asp Gln Gly Phe Trp Ile Gly Gly Gln Tyr Ala Leu  
309 1 5 10 15  
310 Thr Pro Thr Ser  
311 20  
313 (2) INFORMATION FOR SEQ ID NO: 25:  
314 (i) SEQUENCE CHARACTERISTICS:  
315 (A) LENGTH: 6 amino acids  
316 (B) TYPE: amino acid  
317 (C) STRANDEDNESS: single  
318 (D) TOPOLOGY: linear  
320 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:  
322 Phe Ala Ala Ala Val Ser  
323 1 5  
324 (2) INFORMATION FOR SEQ ID NO: 26:  
326 (i) SEQUENCE CHARACTERISTICS:  
327 (A) LENGTH: 23 base pairs  
328 (B) TYPE: nucleic acid

**VERIFICATION SUMMARY**

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L:27 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:28 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]